Rapid Appraisal Approaches for Vulnerability Assessment:

Applications to the FEWS Methodology

A Report to
Associates in Rural Development (ARD)

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Introduction

At the recent FEWS Workshop in Addis Ababa (May 18-22), one of the principal integrating themes was the application of rapid appraisal technologies as a means of enhancing the FEWS capacity to access important vulnerability information. The FEWS field representatives (FFRs) and FEWs regional representatives (FRRs) face the difficult task of assessing potential food security crises and monitoring the vulnerability of diverse populations in countries where the quality of existing data is highly variable, if indeed available at all. Largely reliant on secondary data sources for their vulnerability assessments, the FFRs throughout Africa have neither the time, resources, nor mandate to pursue systematic data gathering activities. On-site data collection is limited to short-term trips to specific regions in order to confirm specific reports or to clarify specific problems. Nonetheless, as the Addis workshop revealed, there is an acknowledged need to improve and to harmonize across countries the information systems that feed into the FEWS reporting system. Thus, one of the foremost workshop objectives was to focus on rapid appraisal methodologies and to determine their applicability to the FEWS information collection and management process.

Rapid appraisal techniques have been accepted as important data collection tools throughout the development community. Rapid rural appraisal (RRA) and participatory rural appraisal (PRA) were designed to address certain types of information needs within binding time and resource constraints. As such, they represent a source of significant potential for the FEWS data collection and analysis endeavor. Since, however, the FFRs have only limited time for field visits, a primary goal of the workshop was to tailor the standard RRA tool kit to the specific needs and conditions of the FEWS mission.

During the workshop, four sessions (a total of approximately eight hours) were dedicated to the presentation of RRA and PRA techniques and to their adaptation to the FEWS reality. In this summary report, we will review the content material that was presented and analyzed in terms of its adaptability to the FEWS context. Then, the report will share the insights that the facilitators gained from the very fertile interaction with the FFRs, and FRRs during the workshop. Finally, we will provide a brief evaluation of the workshop from the perspective of the facilitators.

Rapid Appraisal Methodologies

Rapid appraisal is an approach to data collection and analysis based on informal, semi-structured interviews and systematic, purposive observation. While the methodology is informal and constrained in terms of time, it is nonetheless rigorous in its design. Rapid rural appraisal (RRA) is one such rapid appraisal tool. It is essentially a problem-solving technique in the sense that the logical and operational starting point of the process is a problem (in scientific terms, the hypothesis), and this problem totally determines the design of the methodology. In the FEWS reality, the problem could be a report of hunger among herders in a given region or a general lack of knowledge about population livelihoods in some other region. Because the RRA is subject to time and resources constraints, its capability to provide solutions is also limited by the nature of the problem. For example, it is generally not possible to identify relative frequencies of different types of livelihood systems (e.g., the percentage of herders) or households (e.g., the percentage of polygamous compounds) in a given region. It cannot usually provide accurate

measures of household income by income source or differences in production levels between household types. RRA techniques can, however, be used to solve many kinds of problems directly related to the FEWS mission, such as descriptions of livelihood systems (i.e., food economy characteristics), variations in livelihood and household types, reasons underlying household vulnerability, coping strategies under varying conditions, market and trader analysis, willingness to accept specific development interventions, local community priorities, and other development-related questions.

RRA Interviews

The basic data collection tools of RRA are the semi-structured interview and purposive observation. Thus, the effectiveness of the approach is directly related to the communicative skills of the field interviewer. Semi-structured interviews do not usually involve the use of formal questionnaires and are designed to be more "comfortable" in the sense that the fieldworker attempts to elicit a nature flow of conversation around a given topic. As a seat-of-the-pants measure of success of an RRA interview, the outside observer can simply compare the relative lengths of time spent talking between the interviewer and the interviewee. In the successful encounter, the interviewer provides the topic and the interview "flow", but does not lead or dominate the conversation (while perhaps obvious to the experienced audience, nonetheless this is still the most violated principle of informal interviewing). Several kinds of interviews are differentiated by the objective of the RRA activity itself. Commonly, a fieldwork has the following alternatives:

- *key informant interview*: some problems require the expertise retained by a limited number of specialized individuals, such as adopting farmers, extensionists, traders, school teachers, etc. The fieldworker selects key informant in order to collect this specialized knowledge, recognizing that the key informant has only limited representativeness outside of his/her area of expertise.

- *focus-group interview*: in order to enhance the representativeness of information and to capture contrasting points of view, the informal interview might be conducted with a small group of people (usually 6-10) who are familiar with the problem at hand. Focus-group interviews are particularly useful for eliciting a sub-village group that may not always have an accessible voice, such as women or a specific ethnic group. This format is also indicated when there is substantial household level variation around a specific theme, such as natural resource management practices, production technologies and production levels, coping strategies, health practices, and so forth. The challenge in any focus group is to facilitate the conversation so that the group fully understands the objective of the interview and that all participants have a venue of expression. It is common to have a reduced number of group members attempt to dominate the rest of the group and to "impose" a consensus.

- *village interview*: village interviews tend to be introductory and are critical to establishing rapport in many African villages. Usually all members of the community are invited, by initial conversations are directed toward village elders and leaders. During the village interview, the fieldworker seeks to explain the purpose of the visit,

the nature of the problem being addressed, the consequences of the visit, if any, and the voluntary nature of village participation. Village interviews are effective in documenting local infrastructure (schools, clinics, roads, water, etc.), current production situations, history of crises in the locale, traditional coping strategies, and other types of village-level information. These interviews have also been used to assess levels of socio-economic variation within the village.

- *Household interview*: in certain kinds of RRAs, it is necessary to interview a sample of individual households in order to ascertain intra-household patterns and inter-household variation that is too sensitive to emerge in focus-group interviews. Household interviews are conducted *in situ*, ideally with a majority of household members present. In this sense, it can be seen as a mini-focus group. Household interviews are usually held after the fieldworker has a preliminary understanding of the community so as to not leave out important segments of the local population in the selection of households to be interviewed.

All interviewing requires honesty, respect, and consideration for the time constraints of the interviewees. Timing of interviews should take into account the activity demands of the local population (e.g., seeding, weeding, etc.), the time of day, the place, and other factors that might inconvenience the interviewee. Interviews rapidly lose their effectiveness after more than two hours of duration.

It is common practice to prepare a topic outline prior to any interview. The topic outlines serves as a guide to the conversation flow and should resemble how a logical flow might proceed. Of course, topic outlines are representations of the problem that has oriented the design of the RRA in the first place. Usually, the topic outline is memorized by the fieldworker and is later used to help organize the information gathered from the interview. During the conversation itself, the interviewer takes informal notes to help record the information.

Purposive Observation

The second data collection tool used in RRA is directed observation. Everyone observes, but the RRA practitioner observes selectively and purposively, inspired by the problem under consideration. Not only does observation provide a wealth of information by itself, it also serves to check the information forthcoming from different interviews. Observation is particularly effective to assess operational herd sizes and compositions, division of labor by sex, range of non-agricultural coping strategies, current state of production, production technologies, natural resource endowments, and market activities. These observations can often help to introduce conversations (e.g., "I saw on the road coming into the village that……") and to show at least some rudimentary understanding of local conditions.

The Rapid Rural Appraisal Process

In the workshop, it was emphasized that RRA must deal with two serious pitfalls: sampling error and measurement error. The first danger is the statistical one of non-representativeness. The second danger arises from situations in which information is either intentionally or

unintentionally distorted and inaccurate. The causes of measurement error involve a number of factors, including the inability to establish rapport with the local population, socio-economic and cultural differences between interview and interviewees, the tendency of local peoples to provide "appropriate" answers, the fear of revealing wealth or poverty positions, poor understanding of the objective of the RRA, and simple errors in recording information. The follow section of this report addresses the process of RRA application and attempts to keep these dangers of sampling and measurement error centerstage. Figure 1 summarizes this process fully acknowledging that in the FEWS reality, this process is iterative and dynamic.

Problem Definition

The problem definition depends entirely on the specific FEWS information need. This question is discussed in more detail below; however, it is critical to note that problem identification is an on-going process itself. Increasing amounts of information may suggest new problems, the action taken on the basis of RRA information may generate new problems that require further information collection and analysis, and so on. In any case, the problem definition is the logical first step in the RRA process and should be clearly established before the RRA is designed.

Team Formation

Most problems require information that is multi-dimensional and multi-disciplinary. For this reason, it may be appropriate to assemble people with different kinds of expertise in order to assess the problem at hand. For example, if the problem is one of reports of animal losses due to disease, it might be useful to include a veterinarian on the team or an economist familiar with livestock markets. In typical African cases, it may be necessary to use interpreters for local language situations. Finally, in certain larger-scale activities, there may be several fieldworkers on a team supervised by the FFR. To reduce measurement error, it is important to assure that all team members know their respective roles and have complete understanding of the problem to be investigated.

Design the Sample

Sample design is also determined by the problem that forms the objective of the activity. If the problem is one of confirming reports of poor harvests in a given region, the sample size should be large enough (i.e., the number of villages visited) to allow extrapolation—even non-statistical generalizations—to the region level. Within villages, the sample issue is similarly critical, since the fieldworker must assure that the information from one or two people adequately represents the target group. Underrepresented groups, such as women and the poor, while of critical interest to FEWS, may have difficulty in expressing their positions in an RRA activity, if explicitly not included in the sample. Sampling in RRA activities is a question of judgment and samples are often selected judgmentally or purposively to capture representative groups. Such sampling implies prior knowledge of the population or of the underlying range of variation with regard to the critical information categories.

Select Techniques

The next design step in the RRA process is to select the techniques that will be used. If the problem determines that intra-village information is critical, the choice of technique will vary from that chosen to understand village-level factors. In recent years, there has been a movement toward participatory rural appraisal (PRA) techniques that seek wider village participation and community expropriation of the research activity. PRA is found to be effective in solving problems that require some spatial or temporal ordering of community life or in establishing priorities and strategies of community action. These techniques are designed to reduce measurement error through enhancing rapport, minimizing the interview role of the fieldworker, and providing an opportunity and the environment for local people to reflect upon areas of their lives not commonly raised in a public forum. These techniques were introduced in the workshop.

With the selection of techniques, the team should then prepare topic outlines that will guide the implementation of the activity and provide a basis for later organization of the data. The topic outline should be relatively brief and committed to memory. Examples of topic outlines were distributed in the workshop materials.

Logistical Planning

Several factors are involved in logistical planning and decisions. The size of the team in each village might affect the development of rapport, and the duration of the activity could require overnight accommodations (camping gear, food, etc.). As noted above, timing of activities is also important, since local people have their daily routines to attend to. It has been our experience that to overnight in a village vastly improves rapport and stimulates active conversation and interest within the community. It also provides a wider time frame for observation of community activities.

Fieldwork Implementation

The implementation of the fieldwork itself is a challenge in organization and flow. Many times, plans can go awry, and a wide range of unforeseen circumstances can require modification of the original activity: funerals may occur, it may be market day, the extensionist may be on vacation, etc. To be successful, the RRA design must be flexible enough to accommodate unexpected situations. In general, an indicator of the success of the fieldwork activity is if both the local community and the fieldworkers feel as though they benefited from this communication and interaction. While any interview is at some level intrusive, when skillfully done, it permits a level of human communication that should inform all participants. On the other hand, if the encounter is simply seen as another “official” or “foreigner” asking questions then leaving, the results can only be mediocre at best.

Organization and Analysis of Data

At the end of the day, the fieldwork has notes, memories, perhaps photographs or video film, and a topic outline that oriented the data collection process. The next two steps in the RRA process are critical and often overlooked. In our RRA activities, we have introduced the use of matrices

to systematically organize data. In a sense, the data matrix is an extended and detailed version of the topic outline and provides an analytical framework to compare across villages, households, focus groups, etc. Examples of matrices were provided at the workshop.

In effect, the organization of the information should reflect the different components of the problem under consideration. If the problem was defined as a confirmation of poor harvest results, the columns of the matrix might represent each extensionist or household interview, while each row might represent a critical crop or a coping strategy. A comparison across the matrix or across several matrices generates the raw results of the activity.

The analysis of the results is a further intellectual step. The decision at to whether a 20 percent shortfall in harvest constitutes a critical setback to village food security may depend on a number of mitigating factors, such as the production in other regions, the efficiency of the market, conditions of roads, level of isolation, etc. Here the macro-level data and the micro-level data (from the RRA) effectively interact to provide an analytical context for interpreting the results. It is important to add that the result of a RRA activity is often a "new" problem, that is, the additional information reveals an area where further investigation is necessary. This fact is represented in Figure 1 by the line tying analysis to problem definition.

Action Strategies

The result of any successful RRA activity should be a problem that has been solved, in the sense that the FFR has obtained adequate information to make a decision or to take action. In the FEWS context, such action is often of a reporting nature, i.e., information to be included in the monthly bulletin. At other times, however, the information may also require more urgent response or may directly existing targeting efforts. In these latter instances, the action decision in effect defines a new problem, that of monitoring a given situation defined as potentially critical. This relationship between action and reiterating the RRA process is represented in Figure 1.

Within the complexity of the FEWS project, several RRA processes may be occurring simultaneously as FRRs seek to assess the vulnerability of their respective countries where the quality of information from one region to the next is highly variable or where the livelihoods of local populations vary widely. In essence, the adoption of an RRA approach as part of the FEWS toolkit is a commitment to the collection of more systematic micro-level information that can be integrated into the data set already available in country offices. This RRA approach also provides a framework for the gathering and analysis of micro-level data sets that can be compared across FEWS countries, thus facilitating the comparison of monthly bulletins and other published data.

RRA Applications to FEWS

The presentations of the regional and country staff suggested that RRA techniques could contribute to three areas where FEWS data needs were identified. At the same time, however, it was made emphatically clear that the FEWS staff is overextended in terms of its responsibilities and that time is a major and binding constraint. Thus the desirability of enhancing the information base must be tempered by the reality of human resource limitations.

The first potential FEWS application of RRA (and PRA) techniques is with the vulnerability assessment (VA) of a region. The VA is built upon a foundation of baseline knowledge about the local population and its food economy, including the basic parameters of what we have called the different "livelihood systems", or the interrelated set of strategies by which households produce and procure their basic needs over time and under different conditions. At each administrative level where climate, production, and market information is compiled, RRAs could be used to describe and map the range of distinct livelihood systems (e.g., pastoralists, irrigated farmers, rainfed farmers, emigrant communities, etc.) in terms of the relative weight of different sources of income. RRAs would also document inter-village and intra-village variability in vulnerability levels and assess underlying structural resilience to system disturbances (i.e., crises). In addition, this approach could be used to estimate the relative population frequencies for each system.

The kind of RRA that could solve this data "problem", however, would likely exceed the capacity of the FEWS staff in most countries, since it would require a larger investment in time and resources. It would be more realistic to expect that FEWS might contribute to the design of such an RRA that would be carried out under a separate activity.

The second data need that the RRA can address is the "verification" role. Even where a fundamental vulnerability assessment exists, livelihood systems are subject to constant change due to environmental, economic, or socio-political disturbances. Spurts of cross-border trade, a regional harvest shortfall, an inconsistency in the data provided through secondary sources may require the need for verification in the field. These specific problems are amenable to the application of RRA methods, which could be incorporated into the existing FEWS structure. In fact, as the workshop revealed, many FRRs already use RRA techniques in this fashion. Because the problems tend to be highly specific, the amount of time necessary to implement the RRA is reduced.

The third application of RRA focuses on regular monitoring activities. Just as FRRs currently monitor a set of regional level data, it would be possible to extend this monitoring activity to capture variation at a finer scale. To achieve this, a small number of critical indicators would be regularly assessed in a carefully constructed representative sample in order to accompany vulnerability impacts on specific livelihood systems. This RRA activity, in comparison with the two presented above, makes intermediate demands on FEWS staff resources and would not likely be feasible without some creative partnering with local communities or other organizations in the region.

In effect, the application of RRA methods to the FEWS mission has significant potential to improve and refine existing data sets; however, the limitations of resources in country offices severely restrict the full implementation of RRA under current conditions. Several recommendations of how to overcome these constraints are provided in the following section.

Recommendations for a RRA Strategy in FEWS

The incorporation of a RRA toolkit into the FEWS methodology holds significant promise; however, the resource cost, primarily in terms of time and staff, limits the extent to which RRA can be adopted in-house. It is possible that a more systematic RRA approach to the "verification" component could be instituted within the country offices along with a more widely standardized manner of organizing field data (into matrices, for example). However, staff are mostly hamstrung with regards to designing a baseline vulnerability assessment involving a large fieldwork commitment (4-6 weeks). Similarly, regular monitoring of livelihood systems appears unrealistic given these constraints. Thus, while the workshop participants demonstrated a consensus concern with the lack of quality data, particularly given the expanded demands for their services (e.g., in targeting and responsiveness), the FFRs cannot themselves assume additional data gathering activities. The FFRs emphasized that one area of poor of non-existent data is at the sub-district level (except in those countries where successful food economy analyses have been carried out). The RRA methodology is appropriate to fill this need and could be utilized by FEWS in the following ways:

- Local partnerships: within each country there is a sense of shared mission among the development community, and the local FEWS office could promote the idea of a country-wide assessment of vulnerability by livelihood system. In this case, the effort would be to use RRA to document the variability in vulnerability at the sub-district level. Such a strategy has been successful in Niger.

- Mission buy-ins: in those countries where USAID has an active presence, it might be possible to garner the necessary funds to conduct a comprehensive RRA at the sub-district level, with outside technical assistance under FEWS guidance.

- In-house sequential applications of RRA: where much sub-district level information is available from secondary sources but gaps still remain, a sequence of short-term RRAs could be designed to meet these specific data needs, with some technical assistance if necessary.

- Innovative RRA adaptations: many of the FFR staff do not face the "foreigner" issue, which increases the transaction costs of RRA applications, and they can effectively use their background knowledge of local conditions and local networks to apply RRA techniques in more precise and elegant manner. One possibility is to involve local village committees in the assessment process (or for verification or monitoring). With the assistance of local "researchers", the RRA can become a more pointed and efficient activity.

There is a large amount of RRA experience already in the FEWS system, and it could be mobilized to enhance the FEWS product in assessment, verification, monitoring. The RRA is most effective at identifying critical variation at the sub-district level and could be used to compile the critical sub-district information in a systematic and comparative way.

Workshop Evaluation

From the perspective of the facilitators, the outcome of the workshop was positive and encouraging. It is necessary to recognize the high quality of the field staff at both the country and regional levels. Their competency and dedication to the mission were evident throughout the workshop, and they clearly have risen to the challenge. While the experience levels of the FFRs varies quite widely across country, the majority appear to have been exposed to RRA methodology, and a good number have already been involved in RRA activities. The facilitators had expected more of a training workshop in the sense that the primary objective would be to enhance RRA skills, including those in interviewing and observation. It was quickly apparent, however, that the workshop would focus more on the FEWS data needs and the applicability of RRA to that context. As a consequence, less time was spent on RRA skill-building (a difficult task given the size of the group and the variation in previous experience) and more emphasis was given to how RRA could improve the FEWS product.

We recognize that the presentation of the RRA material later in the workshop might have been desirable; however, the essence of the problem remains more the lack of resources at FFR offices. There unfortunately is not an effective two-day technique in the current RRA repertoire, and innovative solutions had to emerge from the workshop, as we believe they did.

In all, the facilitators agree that effective, two-way learning took place and that the participants were able to reflect upon their mission in critical and creative ways, and they expressed a readiness to try a new approach in the crucible of their complex reality. This is the goal of any workshop.